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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,956	11/21/2006	Arto Huotari	966934.00002	6749
32256	7590	03/18/2011	EXAMINER	
PATTON BOGGS, LLP			MAI, HAO D	
8484 WESTPARK DR.			ART UNIT	
9TH FLOOR			PAPER NUMBER	
MCLEAN, VA 22102			3732	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,956	Applicant(s) HUOTARI ET AL.	
	Examiner HAO D. MAI	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 1-13 and 22-24 is withdrawn in view of the newly discovered reference(s) to Scott (3,363,570). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

- Claims 1 and 14 each recites one single “feed water line” for (1) leading water from pressure chamber to instrument, and (2) leading water from water source, e.g. reservoir chamber, into the pressure chamber. The drawings and specification as originally filed fail to provide support for such single feed water line. In fact, the originally filed drawings and specifications shows two different disconnected feed water line 10.
- Claim 11 and 22 each recites “a branch line arranged in the feed water line downstream of the pressure chamber”, which contradicts with the independent claims 1’s and 14’s feed line being upstream of the pressure chamber. Furthermore, the originally filed drawings and specification do not have support for such branch line in the feed water line being downstream of the pressure chamber as claimed.

Art Unit: 3732

3. Applicant is required to amend the claims to recite subject matter having sufficient support from the originally filed disclosure.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1-7, 12-18, and 23, are rejected under 35 U.S.C. 103(a) as being unpatentable over Holsclaw et al. (6,482,370) in view of Scott (3,363,570).**

6. **Regarding claim 1**, Holsclaw et al. discloses a dental unit (Fig. 1) comprising a feed water line 12 capable of leading water to at least one water outlet point; a pressure chamber 20 in connection with the feed water line 12 and a compressed air line (shown as the un-labeled arrow line above the chamber 20; column 2 lines 58-61; column 10 lines 53-5). Holsclaw et al. disclose the pressure chamber 20 being arranged in functional connection with pressure control means, e.g. 36 or 38 (column 5 lines 54-58).

7. However, Holsclaw et al. fail to disclose such pressure controlling means capable of controlling the pressure in the pressure chamber 20 according to a desired pressure level via the compressed air line. Scott also discloses a pressure chamber 15 in connection with a pressure air line 25 having regulator 21 capable of controlling the pressure in the chamber 15 according to a desired pressure via the compressed air line 25 (Fig. 1; column 3 lines 20-47). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Holsclaw et al. by incorporate such pressure controlling device/regulator in

Art Unit: 3732

order to control the pressure in the pressure chamber according to a desired pressure level as explicitly taught by Scott.

8. Holsclaw et al. are further silent to a pump arranged along the feed water line upstream of the pressure chamber capable of pumping water to the pressure chamber when the pressure in the pressure chamber is greater than a pressure in the feed water line. Scott discloses the pressure chamber 15 adapted to withstand super atmospheric pressure (column 3 lines 8-10) and pump 12, arranged along the feed water line 14 upstream of the pressure chamber 15, capable of pumping water into chamber 15 when the pressure therein is higher than the feed water line 14 (Fig. 1; column 3 lines 64-75). Note that Scott discloses at trip-out pressure of switch 23 being higher than pressure in line 14 but not to exceed pressure in chamber 15 (column 3 lines 64-71); therefore water is being pumped into chamber 15 via feed line 14 by pump 12 even when chamber 15 has a higher pressure than feed line 14. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Holsclaw et al. by incorporating such pump in order to pump water into the chamber even when the pressure in the chamber is higher than the pressure in the feed line as explicitly taught by Scott.

9. **As to claims 2-3**, Scott's pressure control device 21 includes a 3-way valve arrangement 26 (Fig. 1). **As to claims 4-5**, Holsclaw et al. fail to disclose means for recognizing height of the fluid level. Scott discloses means 30/34 for recognizing height of the fluid level, wherein the pump 12 is configure to pump water periodically into the chamber according to a signal, i.e. trip-out, from means 30/34 (column 4 lines 2-12). **As to claims 6-7**, Scott discloses of a reservoir chamber 10; it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Holsclaw et al. by including a reservoir chamber as taught by Scott for storing water from the city line before being pumped

Art Unit: 3732

into the pressure chamber so that the pressure chamber can be readily replenished. Note that the claimed overflow edge structure is very well known, such as the overflow edge/hole structure disposed near the top of household bathtub or sink wall. It would have been obvious incorporate such overflow edge structure to Holsclaw/Scott's reservoir chamber in order to ensure fluid level in the reservoir does not pass certain predetermined height. **As to claim 12-13**, it would have been obvious that the pressure chamber is detachable from the feed water line since city or public feed water line does not come with undetachable pressure chamber. **Regarding the method claims 14-18 and 23**, the claimed steps would have been obvious and naturally carried out when using the system disclosed by Holsclaw in view of Scott as detailed above.

10. **Claims 8-11, 19-22, and 24, are rejected under 35 U.S.C. 103(a) as being unpatentable over Holsclaw et al. in view of Scott, and further in view of Yamada et al. (5,151,731).** Holsclaw/Scott fail to disclose the reservoir chamber being opened to atmospheric pressure and the claimed specifics of a feed link and detergent feed link to the reservoir chamber. Yamada et al. show a known water replenishing system (Fig. 7) having a storage chamber 12 being open to atmospheric pressure having distanced upstream feed links capable of feeding water and/or chemical/detergents into the chamber 12. Also note Figure 10 of Yamada shows two-way circulation between at least two of the shown reservoirs/chambers. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Holsclaw/Scott's reservoir chamber being open to atmospheric pressure as a choice well within the skill of an artisan while yielding the same results and to include, and to include such chemical/detergent feed links if required by the dental procedure to include cleaning agents for cleaning teeth. The method claims would have been obvious and naturally

Art Unit: 3732

carried out when using the system disclosed by Holsclaw in view of Scott and further in view of Yamada as detailed above.

Response to Arguments

11. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection as detailed above.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAO D. MAI whose telephone number is (571)270-3002. The examiner can normally be reached on Monday-Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/Hao D Mai/
Examiner, Art Unit 3732**

**/Cris L. Rodriguez/
Supervisory Patent Examiner, Art Unit 3732**